

REMARKS

The Office Action dated April 1, 2004 has been reviewed carefully and the application has been amended in a sincere effort to place the application in condition for allowance.

Objection to the Drawings

Formal drawings are being submitted herewith for the approval of the Examiner.

Examiner's Comments

Referring to paragraph IV of the Office Action, subparagraph A includes a citation to *In re Schreiber*, 44 USPQ2d 1432 (Fed. Cir. 1997), regarding claiming functional, characteristic, physical and/or chemical properties of a material or a process.

Applicant's invention is an enclosure for a fuel cell or a fuel cell system. As claimed in claims 1 and 9, the enclosure includes one or more layers of a thin material that is applied to an exterior body of the fuel cell or fuel cell system such that it conforms substantially to the exterior body. In other words, the material is wrapped around the fuel cell system and conforms to the shape of the fuel cell system, such as in a "shrink wrap" technique. As set forth herein, this shrink wrap technique is not shown in the prior art, and thus any statements or language about functionality or advantages of the shrink wrap enclosure, and/or the functionality of the fuel components themselves, are not critical or needed in order to distinguish the claims from the prior art. Thus, Applicant believes that

the holding of *In re Schreiber* and related cases is not relevant to the examination of the present claims.

Claim 13 was objected to on the basis that it claims the tradename "Teflon®". Claim 13 has been amended herein to recite the proper chemical name, tetrafluoroethylene. In addition, the Specification has been amended to include the ® to indicate the trademark status of the word Teflon, and the chemical name, tetrafluoroethylene, is also included in the Specification.

Claim Rejections

Claim 13 was rejected under 35 U.S.C. Section 112 for failing to fully spell out the chemical name represented by the acronym PVC. The claim has been amended herein to refer specifically to "polyvinylchloride".

Claims 9 and 1 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over United States Patent No. 6,326,097 ("Hockaday"), United States Published Patent Application No.: US2004/0013927 ("Lawrence") and United States Published Patent Application No.: US2002/0102451 ("Acker").

Hockaday describes a microfuel cell powered device, as illustrated in the embodiments cited by the Examiner, such as that shown in Figs. 2-10. In Fig. 8, for example, the microfuel cell array 44 is based along the length of a polycarbonate plastic module housing 42. A fuel cavity includes a fuel tank 45, which is placed within the cellular telephone 31 and a plastic housing 42.

It is noted that the plastic housing of the fuel cell illustrated in Hockaday's Fig. 8 is made of a polycarbonate plastic. The embodiments in the other figures appear to be similar. Polycarbonate plastic, as will be known to those skilled in the art, is any of a various tough transparent thermal plastics characterized by high impact strength. In other words, a hard plastic is used to provide impact resistance if, for example, the cellular telephone is dropped.

This teaches away from Applicant's invention, which as described above, involves an enclosure that is comprised of thin layers of material that conform substantially to the exterior body of the fuel cell system. Applicant's invention is not a hard plastic housing. It is a shrink wrap enclosure which provided compression and leak resistance. Thus, Applicant's invention as claimed in claims 1 and 9 is not obvious in view of Hockaday alone.

United States Published Patent Application No. US 2004/0013927 to Lawrence et al. ("Lawrence") describes a fuel cell assembly that includes a removable fuel cartridge that has an internal flexible fuel bladder. The enclosure 72 for the fuel cell of Lawrence is illustrated in Figs. 2 and 3, and it is stated to be an injection molded component [Paragraph 0081]. The reference indicates that other methods of forming the enclosure can be utilized including for example, that the enclosure is machined. Each of these examples contemplates a resulting enclosure that is a rigid case for the fuel cell. The examples do not disclose, teach or suggest wrapping the exterior body of the fuel cell or fuel cell system in layers of a thin plastic that conform to the shape of the exterior body. Thus, nothing in Lawrence alone renders Applicants' invention obvious.

United States Published Patent Application No. US2002/0102451 to Acker et al. (“Acker”) describes a fuel cell membrane and fuel cell system with integrated gas separation. As illustrated in Fig. 2 and described in paragraph 0048, the fuel cell system includes a fuel cell housing 12 to which a fuel source 26 may be attached. The Acker reference does not disclose, teach or suggest providing thin layers of material around the fuel cell or the fuel cell system. Thus, Acker alone does not render Applicant’s invention obvious.

None of the cited references alone, nor in combination, render Applicants’ claimed invention obvious because none of the references teach wrapping the fuel cell or fuel cell system in one or more thin layers of material that conform substantially to an exterior body of the fuel cell or fuel cell system in order to provide leak resistance, additional compression and for enclosure purposes. Accordingly, Applicants’ claims 1 and 9, as amended herein, are patentable over the cited references.

SUMMARY

All of the objections and rejections raised by the Examiner have been addressed herein, and the claims which stand rejected have been amended. The remaining claims have been allowed.


It is respectfully submitted that the application is now in condition for allowance.

Please do not hesitate to contact the undersigned in order to advance the prosecution of this application in any respect.

Please charge any additional fee occasioned by this paper to our Deposit Account

No. 03-1237.

Respectfully submitted,



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